



Shop Order

Lake Vaughan Fire Department
 George Emin
 509 Main Street
 Yarmouth, NS B5A 1H6

Exp. Date: 05/18/2017
Quote No: E-LakeVaughan-NS-0009
Job/Order No: 19938
BODY: 00-10-31 Metalfab Tanker - ULC 05/13

06/05/2018

Page 1

PART NO	S	DESCRIPTION	QTY	ID
		== Metalfab Tanker - ULC 05/13 - 0.000 ==	1	MTL
	S	CHANGE ORDER C	1	MTL
00-10-1000		Metalfab Tanker E	1	MTL
00-20-1000		Company Profile E	1	MTL
00-20-1500		Standard Body Warranty	1	MTL
00-20-1550		Metalfab Limited Ten (10) Year Paint and Corrosion Warranty	1	MTL
00-20-1700		Hale Pump Warranty - 5 years	1	MTL
00-20-1800	S	Polypropylene Tank Lifetime Warranty	1	MTL
00-20-2000		Plant Visits - unlimited at customer expense	1	MTL
00-20-3000		No Bonding Required	1	MTL
00-20-3500		Certification for Fusion Welding of Aluminum	1	MTL
00-20-4000	S	Quality System registered to ISO 9001:2015	1	MTL
00-20-4500		Fire Apparatus Manufacturers' Association Membership	1	MTL
		GENERAL INFORMATION	1	MTL
10-11-0000		Intent E	1	MTL
10-11-0105		Vehicle Data Recorder not requested E	1	MTL
10-11-1100	S	ULC S515-13 Compliance	1	MTL
10-11-1600		> ULC Testing - Tanker	1	MTL
		ENG. NOTE: Note in the shop note if the Fire Department wishes to witness the test		
10-11-2100		Maximum length not specified E	1	MTL
10-11-2200		Maximum height not specified E	1	MTL
10-11-2300		Overall length is less than 30'	1	MTL
10-11-2500		General Construction	1	MTL
10-11-3000		Manuals - two copies ***Two copies of chassis manuals are required.	1	MTL
10-11-3600	S	> Delivery - FOB Fire Department	1	MTL
		ENG. NOTE: Note in the shop note if more than 4 hours of training is required		
10-11-4000		Payment Terms - Chassis Net 10 days, Balance COD	1	MTL
10-20-1200		Hose bed capacity - standard ULC Tanker	1	MTL
10-20-2200		Equipment carrying capacity - standard ULC Tanker	1	MTL
		CHASSIS INFORMATION	1	MTL
20-11-1000	S <	Chassis supplied by Metalfab - Freightliner M2 106	1	MTL
		Model year 2018 Freightliner M2 106, 3 man cab - fixed driver seat and 2-man too		
		box bench seat		
		VIN 1FVACYFE1JHKA1521		
		Steel front bumper(silver), No exterior sun visor, Grey dash finish		
		40,600 lb GVW 14,600 lb front axle 26,000 lb rear axle		
		208" WB 142.45" calculated cab to axle		
		Cummins L9 330 hp @ 2000 rpm, 2200 governed rpm		
		1000 lb/ft torque at 1400 rpm		
		Allison 3000 EVS automatic transmission, 275 amp alternator		
		189 liter fuel tank		

PART NO	S	DESCRIPTION	QTY	ID
		Polished aluminum wheels with trim (trim by Nova) ESC L3240 EB Red Elite BC		
20-11-1500		2013 Emission chassis modifications	1	MTL
20-11-1700	S	Chassis Motor Vehicle Inspection required Dated the month of delivery (Nova Scotia) Stop by at Nova to have MVI done when delivering to the Customer	1	MTL
20-21-0500		Fluid capacity plate	1	MTL
20-21-0600		Pumping test plate	1	MTL
20-21-1010		Maximum riders sign - 3 persons	1	MTL
20-21-1500		Seat belt warning labels - 2 door chassis	1	MTL
20-21-1530		Tire Pressure Indicators - Single Axle	1	MTL
20-21-1600		Apparatus Information Label	1	MTL
		An information label is provided in the chassis cab, visible to the driver, stating: "When manufactured, this vehicle was: ** m high ** m long ** kg GVW Changes in height since the apparatus was manufactured shall be noted on this plate by the Fire Department"		
20-21-2000		Non removable key	1	MTL
20-21-2500		Shifter lock not required	1	MTL
20-21-3500		Rear step warning label	1	MTL
20-21-3810		Front mudflaps provided with chassis	1	MTL
20-21-4000		Rear mudflaps - Metalfab Logo	1	MTL
20-31-0200		Fuel fill label -Ultra Low Sulfur Diesel only	1	MTL
20-31-0500		Alum tread fuel tank trim, Conv - 2 door Vertical trim only, OEM cab steps remain	1	MTL
20-31-1900	S	Chassis cab painted by chassis OEM - single colour	1	MTL
20-41-0600		Intake air shutoff for engine not required	1	MTL
20-41-0900		Auxiliary braking system disabled when pumping	1	MTL
20-41-1100		Transmission programming - Allison WT ***Includes "Pump Engaged" light next to pump shift on chassis instrument panel.	1	MTL
20-41-1500		Extend exhaust pipe - RS front of rear wheels Engineering to specify exhaust pipe material as required by the chassis manufacturer. Engineering to sign off on the exhaust configuration to make sure it meets the chassis manufacturer's emission specifications.	1	MTL
20-41-1801		Battery boost terminals not required - batteries accessible	1	MTL
20-41-2000		Chassis batteries remain in OEM location	1	MTL
20-41-2510		Fuel fill at step fuel tank under cab	1	MTL
20-41-2600		Chassis fuel tank remains in OEM location	1	MTL
20-41-5100		Rear Tow Hook - pintle hook	1	MTL
20-51-0700		Master Battery Disconnect included with chassis	1	MTL
20-51-2500		Back up alarm included with chassis	1	MTL
20-51-3000		Air inlet with matching fitting - LS For a back up in case the pump plus fails. Located on left side pump panel.	1	MTL
20-51-3400		Protection valve installed for air operated accessories	1	MTL
20-51-6200		> 120 volt 20 A shore line connection in chassis cab ENG. NOTE: Requires 20-51-75 120 volt auto eject or 20-51-80 120 volt inlet Standard 5-20R duplex receptacle in chassis cab, not fused. For the battery conditioner 20-51-6600 to plug into. Minimum 12" from floor level.	1	MTL
20-51-6600		Kussmaul Pump Plus conditioner/compressor Conditioner located under two man bench seat Compressor located in pump house - right side easily accessible through the	1	MTL

PART NO	S	DESCRIPTION	QTY	ID
		access door.		
20-51-7101	S	Electric System Management - V-Mux	1	MTL
20-51-7500		Super Auto eject for 120 v - 20 A with sealed enclosure Located on left side pump panel, minimum 24" from the ground	1	MTL
20-51-8500	S	Engine compartment lighting - LED to meet ULC Switched by park brake	1	MTL
20-51-9001		Air horns not requested	1	MTL
20-52-3500		> Chassis steering wheel lined up by Metalfab ENG. NOTE: Freightliner, Sterling, and Spartan only	1	MTL
20-60-0400		Chassis wheelbase does not change	1	MTL
		PUMP AND PLUMBING	1	MTL
30-11-1000		Hale AP PTO pump - 420 IGPM	1	MTL
30-15-0303		Plumbing - non manifold pump SM	1	MTL
30-20-0500		Valves and controls - side mount panel	1	MTL
30-20-1003	S	Suction and discharge valves are Elkhart brand	1	MTL
30-20-1630		Piping galvanized steel - PTO pump	1	MTL
30-20-1700	S	1-1/2" thread specifications - NPSH	1	MTL
30-20-1800	S	2-1/2" thread specifications - NSZ1 Customer provided a 2-1/2" double female adapter and a 2-1/2" cap, given to parts room December 15-17	1	MTL
30-20-2000		Piping hydrostatic test	1	MTL
30-20-2505		Anodes in suction and discharge piping not requested	1	MTL
30-21-5510		Tank to Pump 3" w/ check valve non manifold pump 4" piping and 4" check valve	1	MTL
30-22-0500		Tank Fill valve 2"	1	MTL
30-31-2500	S	Suction - 4" not gated each side non manifold pump 5" header	1	MTL
30-31-25AA	U <	Storz fittings on 4" suction w/ end cap (pr) SOPT in file 4" FNH x 4" Storz straight rigid adapter Kochek # S37S44 Metalfab # 1501006 4" Storz cap with suction gasket Kochek # CC407 Metalfab # 1501453	1	
30-32-7520		Suction - 2-1/2" left side, bleeder, non manifold pump	1	MTL
30-40-2006	S	4" right discharge, plumbed 3", bleeder, slow close, non manifold pump	1	MTL
30-41-2006		2-1/2" RS discharge, bleeder, non manifold pump	1	MTL
30-41-2506		2-1/2" LS discharge, bleeder, non manifold pump	1	MTL
30-44-0500		1-1/2" crosslay (each), 2" valve, bleeder The crosslay transverse hose bed is equipped with stainless steel rollers on each end for easier hose removal Capacity for 250 ft of 1-3/4" hose and nozzle.	1	MTL
30-44-05AA	U <	1.5" crosslay - dry lay (no plumbing) SOPT 797 The crosslay transverse dry lay hose bed is equipped with stainless steel rollers on each end for easier hose removal Capacity for 250 ft of 1-3/4" hose and nozzle.	1	
30-51-0400		Pump shift - PTO Pump and Roll ***Includes "Pump Engaged" indicator lights on chassis instrument panel and on the pump panel ***Includes "Throttle Ready" indicator light on Pump operating panel Includes indicator light showing "OK TO PUMP" when transmission is in neutral, park brake is set, and PTO control energized. The remote electronic throttle will be energized in this mode. Includes indicator light showing "OK TO PUMP AND ROLL" when the transmission is not in neutral, the park brake is not set, and the PTO control is energized. The remote	1	MTL

PART NO	S	DESCRIPTION	QTY	ID
		electronic throttle will not be energized in this mode.		
30-51-1500		Power shift PTO - Automatic transmission	1	MTL
30-51-1501		PTO driveshaft E	1	MTL
30-51-6640		Class One "TPG Plus" Governor/Throttle	1	MTL
30-51-7000		Suction side relief V/V, manifold pump	1	MTL
30-51-7700		Primer Hale oil less ESP with oil tank Hale	1	MTL
		Indicator light on panel to show when primer is operating		
30-51-8100		Heat exchanger included with chassis	1	MTL
30-52-1000		Master drain V/V, 12 port	1	MTL
30-52-3001		Foam system not requested E	1	MTL
		WATER AND FOAM TANKS	1	MTL
40-11-2100	S	Poly water tank (Imperial gallons)	1	MTL
40-11-2200		Water tank capacity certification (tank manufacturer)	1	MTL
40-11-6500	S	Tank capacity 1500 Imperial Gallons	1	MTL
40-21-1000		4" tank to pump connection	1	MTL
40-22-0500		2" tank fill connection	1	MTL
40-23-0500		1" water level gauge connection	1	MTL
40-23-1040		4" direct fill connection	1	MTL
40-23-1060		10" Newton dump connection	1	MTL
40-30-0500		Sump drain valve (3" gate valve) with linkage E	1	MTL
40-30-1100		Water Fill Box middle left side	1	MTL
40-31-4500		10" rear Newton dump, painted steel	1	MTL
40-31-4700		Newton dump, top mount manual operation	1	MTL
		Lock open device is required		
		Ensure the manual control clears the full width step above it.		
40-31-5000		Newton dump - 36" telechute painted steel	1	MTL
40-31-5600		> Rotating dump chute for Newton dump painted steel	1	MTL
		ENG. NOTE:		
		Requires top mount control on dump valve		
		Bumpers/stops required to prevent chute from coming in contact with rear flashing lights		
40-31-5800		Support for rotating dump chute if necessary	1	MTL
		Engineering to determine if this support is required		
40-31-8000		4" Storz rear gtd fill	1	MTL
		As low as possible beside dump like Port Maitland		
40-99-05AA	U	Back tank gravity fill line at back of truck	1	
		SOPT in file		
		Similar arrangement as St. Andrews, NS M16-18975 - see pic 1841		
		ELECTRICAL	1	MTL
50-11-0300		Base electrical system - multiplex E	1	MTL
50-11-0600		Warning Light Certification	1	MTL
50-11-0700		Low Voltage Electrical system test	1	MTL
50-11-0800		Low Voltage Electrical System Documents	1	MTL
		As required by ULC and NFPA standards		
50-11-0900	S	Rocker switch panel with master warning switch	1	MTL
		Located in center overhead console left of siren		
		***Rocker switch assignments:		
		MASTER		
		-LIGHT BAR RED		
		-LIGHT BAR CLEAR		
		-REAR BEACONS		
		-FLASHING WARNING		
		-DITCH LIGHTS		
		-REAR FLOODS		
		-LED WORK LIGHTS LEFT (50-25-05AA)		
		-LED WORK LIGHTS RIGHT (50-25-05AA)		

PART NO	S	DESCRIPTION	QTY	ID
50-11-1400		Federal PA300 100 watt siren	1	MTL
50-11-1620		Siren speaker, 100 watt, in front bumper	1	MTL
50-11-2600		Siren to be accessible to driver and officer Located in center overhead console right of rocker switches	1	MTL
50-11-5001	S	> Code 3 LED 21TR47NFPA1 light bar ENG. NOTE: Adds 4" to overall height (measuring from roof of chassis) P/N 1570894	1	MTL
50-11-6501	S	Rear Directional Light not requested	1	MTL
50-11-8000		Rear beacons-Code 3 550 red (pr)	1	MTL
50-12-0400		Front flashers (pr)-red Code 3 45R LED	1	MTL
50-12-1100		Front side inter lts (pr)-red Code 3 45R LED	1	MTL
50-12-1200		Body side inter lts (pr)-red Code 3 45R LED	1	MTL
50-12-1300		Rear flashers (pr)-red Code 3 45R LED	1	MTL
50-21-1500		Rear floods (pr)-Unity Note that these lights are also used as rear step lights and cannot be managed	1	MTL
50-21-1600		Parking (ditch) lights in rear fenders Switched in cab and also interlocked to come on when truck is placed in reverse gear.	1	MTL
50-21-5100		> Compartment lighting - LED tube lights in each compartment (rollup doors) ENG. NOTE: Rollup doors only 4" round LED lights in low side compartments over rear wheels	1	MTL
50-21-5500		Door Ajar warning light Located in overhead console over drivers seating position Bilingual Warning label in cab to read: "Do Not Move Apparatus when Light is on"	1	MTL
50-21-5550		Equipment rack not stowed warning light Located in overhead console over drivers seating position Bilingual Warning label in cab to read: "Do Not Move Apparatus when Light is on" One for the drop down ladder rack One for the drop down portable tank rack	2	MTL
50-21-8001		Step lights for body steps - 4" LED Switched with park brake	1	MTL
50-21-8200	S	Step lights for chassis steps - LED to meet ULC Switched with park brake	1	MTL
50-21-8600		LED clearance lts and reflectors	1	MTL
50-22-0700	S	Whelen 64 LED tail/brake-turn-backup module (pr)	1	MTL
50-25-05AA	U <	Grote LED work light at each corner of the body (priced per pair) SOPT in file Grote # 63981-5 LS and RS switch in cab	2	
50-31-6550		Ground lighting (LED Lumabar) - 2 door chassis Switched with park brake	1	MTL
50-31-6570		Ground lighting (LED Lumabar) - side mount body Switched with park brake	1	MTL
50-31-65AA	U	Hose bed lighting - LED strip lighting on front partition Switched with park brake	1	
50-35-0500		Installation of customer supplied mobile radio Radio information list required - obtain at the Pre-construction meeting	2	MTL

PART NO	S	DESCRIPTION	QTY	ID
		Radio's will be mounted where space permits between the cup holders. Require that radio's be at Metalfab when chassis arrives.		
50-35-0560		VHF antenna with base - commercial chassis Customer to specify any special mounting locations or spacing requirements	2	MTL
		BODY		
60-10-1400		Single axle extruded aluminum body	1	MTL
60-10-4100		No "beavertail" rear step supports	1	MTL
60-10-4500		Aluminum tread plate fender surround - single axle	1	MTL
60-10-4700		Integral aluminum fender trim	1	MTL
60-10-5400		> Diamondback pumphouse steps	1	MTL
		ENG. NOTE: Maximum height of step is 24" from ground		
60-10-5430		> Diamondback 19" rear step	1	MTL
		ENG. NOTE: Maximum height of rear step is 24" from ground		
60-10-6000		Extruded rub rail	1	MTL
60-11-0200		> Front left side compartments intermediate height	1	MTL
		ENG. NOTE: Specify critical dimensions in shop note		
60-11-0600		> Front right side compartments intermediate height	1	MTL
		ENG. NOTE: Specify critical dimensions in shop note		
60-11-0900		> Rear left side compartments intermediate height	1	MTL
		ENG. NOTE: Specify critical dimensions in shop note		
60-11-1300		> Rear right side compartments intermediate height	1	MTL
		ENG. NOTE: Specify critical dimensions in shop note		
60-11-1900		> Low side compartment (up to 18") each	2	MTL
		ENG. NOTE: Specify critical dimensions in shop note Specify type of door Specify flip up or drop down Specify which side of body		
60-11-3100		No rear compartment	1	MTL
60-11-4500		Flush mount aluminum door - single with "D" handle	2	MTL
60-11-5510		Rollup door - intermediate height	4	MTL
		Natural aluminum finish Includes magnetic door switch, LED tube lights, rubber bumpers to prevent pinch point		
60-31-4100		Extruded aluminum handrails Minimum 2" clearance from handrail to any surface	1	MTL
60-31-5500	S	Lighted steps at rear of body (folding) Maximum height between steps is 18" Switched with park brake	1	MTL
60-31-5600		Steps and grab handles at front of body next to pump panel Maximum height between steps is 18"	1	MTL
60-31-5800	S <	Step/platform over rear dump The step is to be 9" deep and full width on the rear of the body	1	MTL
60-31-6500		Compartment matting-Turtle tile	1	MTL
60-31-8700		> Sliding tray (ea) - 400 pound capacity with gas strut	2	MTL
		ENG. NOTE:		

PART NO	S	DESCRIPTION	QTY	ID
		Specify location		
		Located at floor level in the following compartments; Tray #1 - Left side front compartment Tray #2 - Right side front compartment Reflective stripe is applied on the exposed edge for visibility when the compartment door is open		
60-31-9600		> <i>Adjustable shelf (ea)</i> ENG. NOTE: Specify location	4	MTL
		All full depth shelves located in the following compartments; Shelf #1 - Left side front compartment - Welded corners to due to width of shelf Shelf #2 - Left side rear compartment Shelf #3 - Right side front compartment - Welded corners to due to width of shelf Shelf #4 - Right side rear compartment Reflective stripe is applied on the exposed edge for visibility when the compartment door is open		
60-32-3500		One adjustable hose divider Hand hold required in end	1	MTL
60-32-7500		Hose bed - aluminum	1	MTL
60-33-0000		<i>Paint exterior - Imron Elite</i> *** Paint code and colour red to match cab	1	MTL
60-33-0200		Undercoat vehicle with KROWN rust protection	1	MTL
60-33-0600		<i>Chassis wheels not painted</i> Aluminum wheels	1	MTL
60-33-1000		Paint pump and plumbing job colour	1	MTL
60-33-1500		Buffed finish compartment interior	1	MTL
60-33-2200		<i>Lettering - 80 letters up to 3" tall - 3 colour</i> *** Vinyl letters, Fire Department to provide details on location and text. "In memory of Arthur Earl" on each side	1	MTL
60-33-3000		<i>Reflective stripe - 4" white</i> 50% of perimeter each side and 25% of perimeter front	1	MTL
60-33-3310		<i>Reflective stripe - red and yellow chevron at rear</i> Minimum 50% of rear vertical surface	1	MTL
60-33-3500		<i>Tarp over hose bed - black</i> A hosebed cover will be provided and secured to top body flanges by quarter turn snaps at front of hosebed and Velcro on each side edge of the cover. A weighted flap will be furnished at the front of the cover, and Velcro straps will be provided on the rear of the cover to tie around the rear handrail. Color to be black.	1	MTL
60-33-4600		<i>Aluminum cover over crosslays - with end tarps (black)</i> A hinged aluminum crosslay hosebed cover will be provided over the crosslays. Small tarps with Velcro straps to enclose each end are provided.	1	MTL
60-40-1500	S	<i>4" Hose tray - side mount (ea)</i> Mount over ladder rack on left side Stainless steel scuff plate each end For customer supplied 4" hose with Storz couplings Customer hose dimensions: Overall length - end of coupling to end of coupling - 121" Diameter of Storz coupling at largest point - 6-1/2"	1	MTL
60-40-5500	S <	<i>Suction hose tube (each) with door</i> For customer supplied 4" hose with Storz couplings Customer hose dimensions: Overall length - end of coupling to end of coupling - 121" Diameter of Storz coupling at largest point - 6-1/2"	2	MTL

PART NO	S	DESCRIPTION	QTY	ID
60-41-1015	S <	Pike Pole tube in suction hose tube For customer supplied pike poles Tubes are 2" ID, pike poles are 10' long	2	MTL
60-41-7000	>	Drop down portable tank rack - manual operation ENG. NOTE: Specify mounting location desired. If Portable tank is customer supplied, specify overall dimensions when the tank is in stored position To house the 2000 Imp gallon portable tank 80-15-1000	1	MTL
60-41-7100		Tread plate on body behind porta tank rack	1	MTL
60-41-7110		No tread plate exterior manual drop down porta tank rack	1	MTL
60-41-7500	S < >	Drop down ladder rack - 2 section, roof - manual operation For customer supplied ladders Customer ladder make, model and dimensions: Two section ladder Make - CET Overall length - 222" Width of widest rail - 21-1/2" Center to center of rungs - 14-1/4" Diameter of rungs - 1-1/4" Roof ladder Make - Reynolds Overall length - 147" Width of rail - 16" Center to center of rungs - 12" Diameter of rungs - 1-1/4" ENG. NOTE: Specify mounting location desired. If ladder(s) are customer supplied, specify overall length and width, width between side rails, rung spacing; also specify ladder brand and model	1	MTL
60-41-7520		Assist handles for manual drop down ladder rack	1	MTL
60-41-7530		Assist handles for manual drop down portable tank rack	1	MTL
60-41-8600	S <	Top Mount ladder slideway with UHMW slides For customer supplied ladder - 21-3/8" wide	1	MTL
INSTRUMENTATION			1	MTL
70-11-0000		Warning Label on Pump Operator's Panel	1	MTL
70-11-0500		Side mount instrument panel No gauge or visual display can be higher than 84" above the operator's standing position Midpoint of any control cannot be higher than 72" above the operator's standing position	1	MTL
70-11-1500		Stainless steel instrument panels No gauge or visual display can be higher than 84" above the operator's standing position Midpoint of any control cannot be higher than 72" above the operator's standing position	1	MTL
70-11-3200		Colour coded tags	1	MTL
70-11-4100		Stainless steel side panel hood left side	1	MTL
70-11-4500		Diamondback grip type panel hood step right side	1	MTL
70-11-5100	S <	Open storage at rear top of pump house Interior dimensions approximately 9" x 71-1/2" x 15" deep	1	MTL
70-11-5500		Right side tread plate pump access door No opening dimension less than 18" Slot required for Primer level viewing	1	MTL
70-11-7500		Heat pan-aluminum	1	MTL
70-11-8100		Heater in pump compartment not requested	1	MTL

